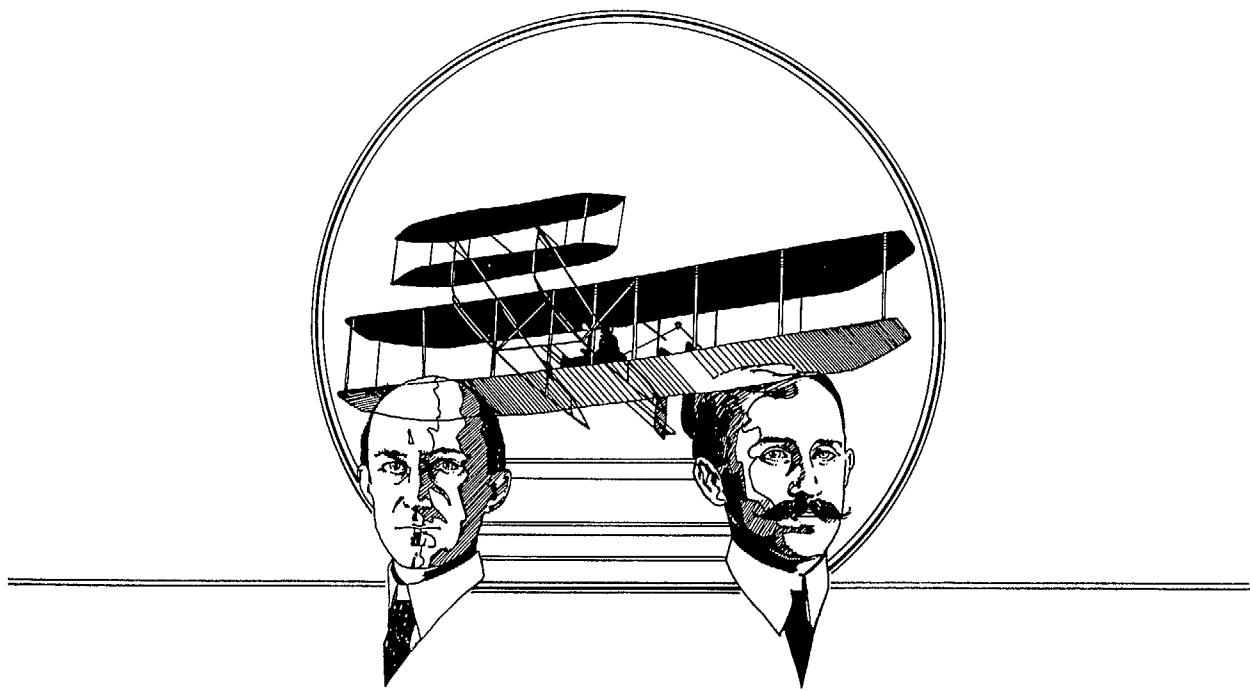


Chapter One
INTRODUCTION



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The growth and economic development of the United States has been directly related to the expansion and technological advancement of the transportation industry. This has included the railroads, the automobile, and most recently, aviation. Since December 17, 1903, aeronautics has evolved from the primitive Wright Brothers' flying machine to jet aircraft weighing three-quarters of a million pounds. To accommodate the rapid increase in the quantity and capabilities of aircraft, airport facility design and operation must keep pace with the basing and operational needs of today's aircraft.

The proper planning and development of airports has become very complex. Consequently, efforts are being made to account for the diverse demands of the air transportation system. Airport development programs must be considered in relation to the total, social, economic, and political environments in which airports exist, and not

relegated narrowly to aviation issues, or even to the slightly wider transportation concerns.

Other factors must be considered as well. The effects of airline deregulation, the consolidation of airlines, and the current and future direction of aviation taxes and airport improvement programs are only a few of the factors that will have short and long term effects on all airports. It will be the principal purpose of this study to bring all of these elements together and analyze their immediate impacts and long term implications on Show Low Municipal Airport in order to provide a plan that will remain valuable throughout the planning period.

The Show Low Municipal Airport Master Plan has been undertaken by the City of Show Low for the purpose of determining the existing and future role of the airport, and to provide the city with needed direction in the future development of an important air

transportation facility. This study is being financed by the Federal Aviation Administration (FAA), the Arizona Department of Transportation (ADOT), and the City of Show Low. The Master Plan Study is being prepared by the airport consulting firm of Coffman Associates, Inc.

This Master Plan is evidence that the City of Show Low recognizes the importance of aviation in community planning and the associated challenges inherent in providing for future aviation needs. The cost of maintaining an airport is an investment which can yield impressive benefits for the community. With a sound and realistic Master Plan, Show Low Municipal Airport will increase its potential as both an economic asset and a source of pride to the residents of the community.

The FAA currently defines three broad categories of aviation activity: Air Carrier, General Aviation, and Military.

Commercial Service Air Carriers are those airlines which provide scheduled carriage of passengers or freight under certificates issued by the Department of Transportation. Air carriers may be divided into two major groupings:

- ♣ **Certificated Route Air Carrier:** *An air carrier holding a certificate of public convenience and necessity issued by the federal government to conduct scheduled services over specified routes. Certain non-scheduled or charter operations may also be conducted by these carriers, all passenger carriers, and combination carriers operating under Federal Aviation Regulation (F.A.R.) Part 121 certificates.*
- ♣ **Commuter Operators:** *Operations of multi-engine airplanes with a maximum seating (excluding pilot) of 19 passengers and a maximum certificated takeoff weight of 19,000 pounds. They operate under F.A.R. Part 135 certificates.*

Air Carrier/Commuter activity is typically the most visible form of flight because it is most common to the average citizen's experience. The deregulation of the aviation industry in 1978 has resulted in an intense diversification in the carriers serving the marketplace, as well as the stratification of the carriers into national and regional service levels.

General Aviation includes every type of civil flying other than the air carriers, consequently, the system is characterized by a relatively low profile. General Aviation flying or usage falls into four major categories:

- ♣ **Business:** The use of an aircraft for executive or business transportation. This category consists of aircraft used by an organization and operated by professional pilots to transport its employees and property (not for compensation of hire); and aircraft used by an individual for transportation required for his or her business.
- ♣ **Commercial:** The use of an aircraft for commercial purposes (other than the commuter and air carrier), including: air taxi, aerial application, special industrial usage, aerial surveys, advertising, aerial photography, and emergency medical transportation.
- ♣ **Instructional:** The use of an aircraft for flight training under the supervision of an instructor.
- ♣ **Personal:** The use of an aircraft for a variety of personal reasons.

General Aviation is the largest and the most significant element of the national air transportation system. General Aviation aircraft constitute 98 percent of all aircraft in use today. Certificated airlines serve fewer than 700 airports in the country, while there are over 16,000 general aviation airports in the country.

It is by no coincidence that general aviation has contributed to the socioeconomic phenomenon that has seen American industry move away from the larger metropolitan areas to smaller communities. Smaller communities can offer industry lower taxes and labor costs, closer access to raw materials and natural resources, and a superior working environment. General Aviation provides the time-saving link for corporate travel that has made the shift to communities such as Show Low extremely attractive.

Military Aviation includes all flying in support of the national defense and conducted by military aircraft. Military activity usually plays a small role in the operation of civilian airports, but often has a disproportionately high impact on airspace.

OBJECTIVES

The Master Plan Study will produce a flexible plan for future airport development that will meet the aviation demands of the region. The primary objective is to produce a long term development program which will yield a safe, efficient, economical, and environmentally acceptable air transportation facility.

The plan will be based upon projected aviation demands, which will establish a schedule of construction priorities for a 20 year period. It will detail the analyses and rationale upon which the Master Plan elements are based. Financial analyses are conducted to determine the feasibility of the recommended plan.

The Master Plan will examine the air transportation needs not only of the community, but also the entire region that Show Low Municipal Airport can be expected to serve. The completed Master Plan will provide a step-by-step, outline of the required developments, and give responsible officials

advance notice of pending airport needs to aid in future scheduling and budgeting.

PROCESS

Because the airport belongs to the public and is intended to serve the entire community, a comprehensive analysis of the airport and the area will be made. Consideration of existing and forecast conditions will serve as a basis for development of recommended airport development, and land use compatibility plans.

To accomplish the objectives of this study, the Master Plan will:

- ♣ **Inventory of Existing Conditions** - Assemble and organize relevant information and data on Show Low Municipal Airport and it's surrounding area.
- ♣ **Forecasts** - Develop detailed estimates of future air traffic activity, by quantity and type.
- ♣ **Capacity/Delay Analysis** - Determine current and future demands upon the existing airfield facilities and estimate the level and extent of aircraft delay that will result if projected demands are realized.
- ♣ **Facility Requirements** - Determine and prepare a list of facility requirements needed to meet projected demands for the airport for existing, short, intermediate, and long term time frames.
- ♣ **Airport Alternatives** - Produce concepts of the various alternatives for airport development.
- ♣ **Environmental Evaluation** - Ensure the environmental factors which may be affected by the development and operation of Show Low Municipal Airport are

properly evaluated and considered in the future development of the airport.

- ♣ **Airport Layout Plan** - Refine the recommended airport development concept into the airport's plan for development.
- ♣ **Financial Plan** - Prepare and analyze a capital improvement program to carry out the recommended development plans. Establish development priorities, schedule proposed development, and estimate development costs. Examine means of financing future development and airport management systems.

REQUIREMENTS

There is uncertainty about not only what can possibly be achieved, but who is responsible for achieving it. Creating a healthy airport environment is a challenge which the airport, its users, the community, and all citizens must jointly undertake. The planning process represents an important step in the direction of accepting that challenge.

The initiation of the Master Plan was in response to the growing demands for improved aviation facilities at the airport. In particular, two major improvements are especially critical to the FAA and Show Low Municipal Airport. The most immediate is the development of adequate runway length to accommodate larger aircraft. Another improvement of major interest is providing improved airport instrumentation to make the

airport more accessible during periods of poor weather conditions. Although these are not the only facilities being investigated in the Master Plan, the development of these facilities will, in part, determine other airport facility requirements and development.

Several questions face Show Low Municipal Airport in the next twenty years. What impact will aviation growth in Arizona have on Show Low? Will the rapid expansion of general aviation demand and commuter airline service be accommodated at Show Low Municipal Airport or will new facilities be required? Will development of a new facilities and improvements to airport capacity be accomplished with minimum impact on the surrounding community? Will future development be compatible with long range land use plans? All indications are that Show Low will be affected by the growing demand for aviation facilities being experienced by cities and metropolitan areas throughout Arizona.

One of the most important elements of the planning process, is the direct involvement of all parties who may be affected by any recommendations that result from the study effort. This involvement was channeled through a Planning Advisory Committee to review the work of the study team, and through a series of public information meetings at strategic points during the course of the study. With the assistance of the Planning Advisory Committee, the Master Plan for Show Low Municipal Airport will reflect the necessary future development to meet the growing aviation demands in the region.